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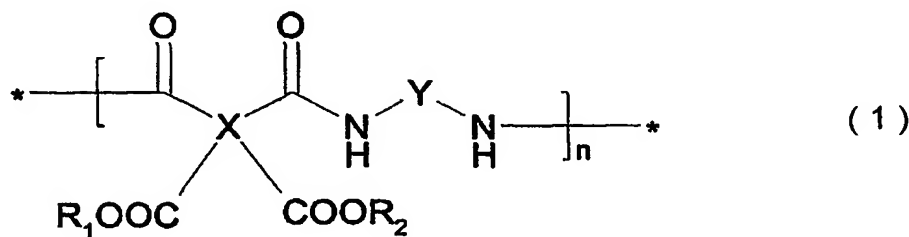
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(54) Title: TRANSPARENT, HIGHLY HEAT-RESISTANT POLYIMIDE PRECURSOR AND PHOTSENSITIVE POLYIMIDE COMPOSITION THEREOF



(57) Abstract: The present invention relates to an aqueous alkali-developable photosensitive polyimide precursor resin composition that is appropriate for highly heat-resistant transparent protection layers and insulation layers for liquid crystal display devices. In more detail, the present invention relates to a negative-type photosensitive transparent polyimide precursor resin composition manufactured in two steps. The first step is the manufacture of a transparent linear polyamic acid (A) from (a-1) one or more kinds of tetracarboxylic acid dianhydrides selected from alicyclic tetracarboxylic acid dianhydrides having 3 to 30 carbon atoms; and (a-2) one or more kinds of diamines selected from aliphatic, alicyclic, or non-conjugated aromatic diamines, having 3 to 30 carbon atoms, having one or more ethylenically unsaturated bonds at side chains as essential components; and the second step is the manufacture of reactive transparent polyimide precursors shown in the following Chemical Formula 1 according to the esterification reaction of the above polyamic acid (A) with ethylenically unsaturated compound (B) containing an epoxy group in the same molecule as the main component. The photosensitive transparent polyimide precursor resin compositions according to the present invention have a superior photosensitivity, and thus, may be used for transparent protection layers and insulation layers of liquid crystal display devices having superior heat resistance, chemical resistance, mechanical strength, and electricity insulation.

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